

REMARKS

Claims 16, 18, 19 and 21 have been amended. Claims 16-21 remain pending in the application.

Drawings

The Examiner has objected to the drawings as not showing the reagent bottle having a plurality of openings closed by puncturable seals as set forth in claim 19. The Examiner's attention, however, is directed to Fig. 1 of the drawings wherein the reagent bottle 3 is shown with a plurality of openings therein. Attached is a copy of Fig. 1 with the reagent bottle and the plurality of openings therein being specifically identified. See also the description in the specification at page 4, lines 5-15. It is therefore submitted that no new drawings are necessary and that this objection to the drawings be withdrawn.

Claim Rejections Under 35 USC §112

Claims 16-21 stand rejected under 35 USC 112, second paragraph as being incomplete for omitting essential analysis elements, such omission amounting to a gap between the elements. Claim 16 has been amended to include the additional elements of a reagent extracting and dispensing mechanism having a reagent probe with a nozzle, a reaction cell and a measuring means for measuring a reaction. It is submitted the claims now meet all the requirements of 35 USC 112.

Claim Rejections Under 35 USC §102 and 103

Claims 16-21 stand rejected under 35 USC 102(b) as being anticipated by Long (USP 5,200,151) in view of Court et al. (USP 5,863,752) and Lopez et al. (USP 4,752,292) and Homberg et al. (USP 5,792,424).

For the reasons set forth hereafter, it is submitted that the amended claims patentably distinguish over the prior art.

Patentability of the Claims

Applicants' invention relates to an automatic analyzer in which a significant feature of the invention is a removable seal piercing tool attached to the outer end of an ordinary nozzle which is used to dispense a reagent. More specifically, as now defined in amended claim 16, Applicants' invention is directed to an automatic analyzer for use with at least one reagent bottle having an opening for taking out a reagent contained therein, with the opening being closed by a puncturable seal member for sealing a reagent from the outside atmosphere. The analyzer includes a reagent extracting and dispensing mechanism having a reagent probe with a nozzle for extracting and dispensing a reagent in the reagent bottle through the opening of the reagent bottle. A reaction cell is provided in which a sample to be analyzed is mixed with the reagent extracted and dispensed from the reagent bottle. A measuring means is provided for measuring a reaction between the sample and the reagent extracted and dispensed from the reagent bottle. Significantly, a seal piercing tool is provided which is to be attached to the nozzle with the piercing tool being removable from the nozzle. The piercings tool has a hollow interior into which

the nozzle is inserted from one end and an opposite end of the piercings tool is in the form of a pointed needle having no opening therein.

Applicants' invention further includes a container for holding the piercing tool before the tool is attached to the nozzle and for holding the piercing tool after it is removed from the nozzle. The piercing tool includes a lever locking the piercing tool to the nozzle when the nozzle is inserted therein to prevent the piercing tool from slipping off the nozzle and the lever is also unlocked from the nozzle to remove the piercing tool therefrom.

Dependent claims 17-21 define further features of the invention including a reagent sampling mechanism for moving the nozzle.

In rejecting the claims, the Examiner asserts that the Long '151 patent discloses a movable table 68 which is alleged to constitute a container for a seal piercing tool with the table 68 holding pipette tips 70 which the Examiner asserts constitute seal piercing tools.

Applicants note, however, that Long merely shows an ordinary disposable pipette tip 70 which is not at all the same as Applicants piercing tool. The disposable tip of Long is attached to the end of a dispensing nozzle in order to prevent a sample and a reagent from mixing with other different samples or reagents during the sucking operation of the dispensing nozzle. Thus, the patent is directed to preventing contamination by the use of the disposable pipette tip. The tips 70 of Long are not seal piercing tools. Moreover, the table 68 is merely a movable tray for holding a set of the disposable tips 70.

According to the present invention as now claimed in claim 16, a sealing piercing tool is to be attached to the nozzle and is removable therefrom. The claim

specifically calls for the piercing tool having a hollow interior at one end in which a nozzle is inserted and having the opposite end being a needle having no opening therein. The disposable tips 70 of Long are not only not piercing tools but there are openings therein through which liquid can be dispensed. It is further noted that in Long, the disposable tips are disposed of after one use whereas in Applicants' invention, the container holds the piercing tool before the piercing tool is attached to the nozzle and then again holds the piercing tool after it has been used and is removed from the nozzle.

Applicants' invention further includes a lever locking the nozzle to the piercing tool to prevent the piercing tool from slipping off and the lever is unlocked from the nozzle to remove the piercing tool therefrom.

The Examiner cites the Court '752 patent as disclosing a reagent bottle having an opening closed by a puncturable seal. Applicants acknowledge that bottles having puncturable seals closing an opening are known in the art. Applicants' invention, however, includes much more than this. Court does not disclose the other significant elements of Applicants' invention as now claimed.

The Lopez '292 reference was cited as disclosing a medical connector for introducing medication into a patient in which a piercing tool 92 has a latch locking mechanism. Lopez, however, is directed to different art and does not show a piercing tool. The Examiner merely alleges that the cap of Lopez is capable of piercing. Again, Applicants note that Lopez does not disclose a piercing tool. Indeed, none of the cited references disclose a removable piercing tool as in Applicants' invention.

Finally, the Examiner cites the Homburg '424 patent as disclosing a slidable guide 60 at the lower end which is urged toward a stop 46 by a spacing spring 70. There is no suggestion in Homburg or Long, however, of combining these references in the manner done so by the Examiner. Indeed, there is no suggestion in any of the Long, Court, Lopez and/or Homburg patents of combining them in the manner done so by the Examiner.

Accordingly, it is submitted that the present invention, as now defined in claims 16-21, is patentable.

CONCLUSION

In view of the foregoing amendments and remarks, the Applicants request reconsideration of the rejection and allowance of the claims.

To the extent necessary, the Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger, Malur & Brundidge, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. KAS-192).

Respectfully submitted,

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FIG. 1

